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UK Estimates of Top Income Shares 2012-2013: Note on Methods

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1. Introduction

HMRC has released *Personal Incomes Statistics 2012-13*, containing the annual Survey of Personal Incomes (SPI) data, based on the personal income tax returns, that can be used to estimate the top income shares published in the *World Top Incomes Database (WTID)*.

There are two significant issues that have to be addressed in constructing and interpreting the estimates of top income shares for 2012-13, referred to as 2012 (the UK income tax year begins in April). The first is the major revision that has been made to the UK national accounts, which are now based on the ESA2010 (before they were based on the ESA95). This affects the income control total, which has been based on national accounts figures since 2009. The second is that the results have to be interpreted in the light of income-forestalling or income-delaying in response to the changes in the top rate of income tax. In March 2009, it was announced by the Labour Government that the top rate was to be raised from 40 to 50 per cent with effect from April 2010, and this led to "considerable forestalling" of income in 2009-10 (Seely, 2014). In March 2012, it was announced by the Conservative Government that the top rate was to be reduced to 45 per cent with effect from April 2013, which again provided an incentive for income to be moved between tax years, in that case from 2012-13 to 2013-14.

2. Population control total

The control total for population is based on the same source as in earlier years. The number of adults aged 15 and over is taken from the ONS mid-year population estimates: *Population estimates for the UK, Mid-2012 and Mid-2013,* Reference Tables, downloaded 20 February 2015 (http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-319259; population estimates Mid 2012).

2012 52.491 million (25.574 million males, 26.917 milion females)

3. Income control total

The income control total underlying the estimates of top income shares has until now been based on the national accounts version ESA95 (*United Kingdom National Accounts 2013*), where the annual data have been converted to a tax year basis by taking ¾ of, say

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2012, and ¼ of 2013 to give a total for 2012-13 (Atkinson, 2012). The 2014 accounts are now based on the new ESA2010, and this has led to revisions, not only to 2012 and 2013, but also to earlier years, potentially affecting the estimates of the top shares back to 2009, when the change was made from the method applied up to 2007 (based on the SPI total with an addition for the non-taxpaying population; no estimates can be made for 2008). It was noted that the two methods produced virtually identical totals for 2007, and this was therefore considered an appropriate year in which to make the change.

The method used to calculate the income control total is set out in Table 1 (where not indicated, source is Table 6.1.4):

Table 1

Balance of primary incomes, gross (b.5g)

- \+ Social benefits, other than transfers in kind;
- \- Redundancy fund benefits (Table 5.2.4S);
- \+ Social Fund benefits (Table 5.2.4S);
- \+ Employee benefits from employers' liability insurance (Table 6.1.4S);
- \- Employers' actual social contributions;
- \- Imputed rent of owner occupiers (Table 6.4);
- \- Attributed property income of insurance policyholders (Table 6.1.3);
- \- Imputed social contributions (net);
- \- Housing benefits (Table 5.3.4S);
- \- Fixed capital consumption.

The changes to the national accounts figure for 2012 principally affect the following items (there are minor revisions, as normal, affecting other items):

(a) Balance of primary incomes, gross (Table 6.1.4), 2012 figure increased from £1,151 billion to £1,215 billion (an increase of £64 billion);
(b) Employee benefits from employers' liability insurance (Table 6.1.4S), no longer separately distinguished; this item is small (£1.7 billion in the 2013 ESA95 national accounts) and this is not taken into account in the new calculations (it is presumably included as a component of another item);
(c) Attributed property income of insurance policyholders (Table 6.1.3); the item D.44 for 2012 increases from £60 billion to £94 billion;
(d) Imputed social contributions (net), 2012 figure increased from £15 billion to £26 billion;
(e) Fixed capital consumption, 2012 figure increased from £50 billion to £69 billion.

In the case of item (c), in the 2014 Blue Book the item D.44 is now split (amounts for 2012 shown in brackets):

D.441	Attributed to insurance policy holders (£22 billion)
D.442	Payable on pension entitlements (£70 billion)
D.443	Attributed to collective investment fund shareholders (£2 billion)

Of these, D.442 has a counterpart in household income, and this element should not have been previously deducted. The deduction should therefore be £24 billion (D.4 minus D.422 using Blue Book 2014), whereas the figure previously used for 2012 (on the previous ESA95 basis) was £60 billion.

A major role in causing the increase is played by the increase in the balance of primary incomes, gross (item a, or B.5g in the national accounts), which increases by £64 billion or 5.6 per cent. It may be noted that the overall impact of revisions on GDP (B.1*g in the national accounts) is estimated at 4 to 5 per cent (ONS, 2014). If we go back to the sources (Blue Book 2013, Blue Book 2014), and calculate the difference of the elements that make up B.5g in 2012 (BB2014-BB2013), then (rounded to the nearest £ billion):

Operating surplus + mixed income	+ £31 billion
Compensation	+ £ 7 billion
Property income	+£46 billion
Total	+£83 billion
Minus Uses	-£19 billion
Balance	+£64 billion

From the ONS articles on the revisions it may be seen that a significant element is the revision for (NPISH) non-profit institutions serving households (see ONS, 2014, and 2014a). The failure of ONS to disaggregate this sector (S15) is a major problem for the present exercise. According to ONS (2014), the revision to this sector added £24 billion, which is a significant amount in the present context.

If we modify the procedure in Table 1 by dropping (b) and subtracting only D.441 and D.442, this yields a total for 2012 which is higher by £86 billion, or some 8.4 per cent. Applied on a tax year basis, the totals are higher by 10.1 per cent in 2009-10, 9.9 per cent in 2010-11, and 9.0 per cent in 2011-12. Standard practice is, where possible, to link series to the latest data, revising earlier series. This would involve increasing the earlier control totals: for example, by the average increase for the three tax years 2009-10 to 2011-12 (which is 9.6 per cent). This would be justified in part by the fact that there was previously an over-deduction under D.44. On the other hand, this is not the only cause of the rise. Another important element concerns the NPISH sector, which has no counterpart in the SPI income data. Moreover, the upward revision of the earlier national accounts-based totals would call into question the previous choice of 2009 as a link year with the previous method. The earlier "constructive" total was the SPI total plus missing income. The move to a national accounts (NA) basis was based, not on the assumption that the NA mirrored such an SPI total, but that the NA calculation was a reasonable indicator of the development over time in such a total. There are clear differences in definitions between the SPI and NA totals (as modified in Table 1), including for example the extent to which interest paid is deducted (the SPI total makes no such deductions) and the measurement of depreciation. (See Appendix II in the second edition of the report of the Canberra Group, 2011.) Looking to the future, it seems very desirable that there should be a fuller reconciliation of the two sides. We need to be able to map from the SPI totals, shown below for 2012/13, to the corresponding entries in the national accounts.

SPI 2012/13 totals £ billion	
Employment	638
Self-employment	73.4
Pensions: National Insurance	42.9
Pensions: other	80.0
Property	13.1
Interest from building societies and banks	7.87
Dividends	45.3
Other investment income	4.19
TOTAL	904

These reasons lead us to apply the adjustment to the ESA2010-based totals, reducing them by 9.6 per cent. The total for 2012-13 becomes £1,019 billion.[1] This should however be regarded as a provisional calculation, pending further analysis of the relationship between the SPI and national accounts totals. If it were possible to align them more closely, and to disaggregate the household sector from the present combined household plus NPISH sectors, then that would be an appropriate occasion for re-consideration.

In calculating the after-tax shares, the total is arrived at by deducting the income tax paid in 2012-13, which was £157 billion.

3. Results

The shares of the top groups for 2012-13 (referred to as 2011 in the database), and the figures for 2011-12 are:

Year	Top 10%	Top 5%	Top 1%	Top 0.5%	Top 0.1%	Top 0.05%
2012	39.13%	27.49%	12.70%	9.25%	4.60%	3.36%
2011	39.15%	27.58%	12.93%	9.50%	4.80%	3.55%

The shares of after-tax incomes in 2012-13 and 2011-12 are:

Year	Top 10%	Top 5%	Top 1%	Top 0.5%	Top 0.1%	Top 0.05%
2012	33.98%	22.78%	9.52%	6.77%	3.28%	2.42%
2011	34.46%	23.10%	9.66%	6.87%	3.33%	2.46%

In interpreting these results, account has to be taken of the delay in incomes to take advantage of the cut in the top tax rate in April 2013. The IFS (2014, page 12) say that they expect "high-income individuals would have an incentive to delay the receipt of income until after April 2013. This would act to artificially reduce mean income in 2012–13 (and subsequently increase it in 2013–14)". The HMRC estimated that there would be "temporary reductions in incomes totalling around £5¼ billion in 2012-13, representing income deferrals to 2013-14, ahead of the reduction in the additional rate in 2013-14 (HMRC, 2014, page 56). They later subsequently said (HMRC, 2015, page 55) that this forecast had been borne out. Such a reduction would amount to some 0.5 per cent of total income in 2012-13. If half of that amount were to be added to the share of the top 1 per

[1] It may be noted that the method used to arrive at a control total for Germany has some similarity, but excludes social transfers in cash, only subtracts employers' actual social contributions, and takes 90 per cent of the resulting total – see Bartels and Jenderny (2015), Appendix A. Applying this method of calculation in the UK case (including the 90 per cent adjustment) leads to a total for 2012-13 of £983 billion, which is 96.5 per cent of the total used here.

cent, it would mean that there was no change in the pre-tax share from 2011 to 2012. It should be emphasised that no adjustments have been made on this account to the estimates included in the *WTID*.

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